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### REMARKS

This response is intended as a full and complete response to the Final Office Action mailed January 31, 2007 and the Advisory Action dated May 8, 2007. Please reconsider the claims pending in the application for reasons discussed below.

#### **I. REJECTIONS UNDER 35 U.S.C. §102(b)**

Claims 96, 98, 100 and 102-104 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Thalhammer-Reyero* (U.S. Patent No. 5,980,096). In response, Applicants traverse the rejection.

Claim 96 recites that an inference engine receives a *multiset* of symbols. The claim term "multiset" is a well understood concept and term of art in mathematics, representing a branch of set theory in which each element of the set has a *multiplicity* of membership. For example, multisets such as {1,1,2,3} and {1,2,3} are different multisets (see e.g., <http://mathworld.wolfram.com/Multiset.html>) as the number of times an element (e.g., "1") appears in the multiset is different. In contrast, in ordinary set theory the number of times an element is repeated in a set is irrelevant – the sets {1, 1, 2, 3} and {1, 2, 3} are identical in ordinary set theory. Therefore, explicit significance of multiplicity among symbols representing biological elements is provided by the receipt of the multiset of symbols in the inference engine, as claimed, without reading any limitations from the specification into the claims.

With regard to the Examiner's statement that the specification does not provide a clear and concise definition of "multiset," the term "multiset" as used in the present application has the meaning set forth herein as one skilled in the art would understand based on the well-understood term "multiset," and reinforced by the operators for "multiset" or "set" identified in the next to the last full paragraph on page 3 of the specification. Furthermore, Applicants need not disclose what is well-known to those skilled in the art and preferably may omit that which is well-known to those skilled and already available to the public (see, M.P.E.P. § 2164.05(a) citing *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), *cert. denied*,

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480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984). In contrast to Applicants' above referenced citation that defines "multiset," the Examiner improperly attempts to interpret the term as "more than one set" without providing any basis for the interpretation that appears to somehow assume that "multiset" is not a term on its own but rather a contraction of the phrase "multiple sets."

To further support Applicants' position, Applicants enclose an affidavit of Sam Owre dated May 31, 2007. Mr. Sam Owre's affidavit constitutes a submission under 37 CFR 1.114 where the affidavit is new evidence in support of patentability.

In view of the foregoing, *Thalhammer-Reyero* discloses modeling systems using "sets" but does not teach, show or suggest causing a processor to "receive a multiset of symbols in an inference engine," as recited in claim 96. For at least this reason, Applicants submit that claim 96 and all claims dependent thereon are not anticipated by *Thalhammer-Reyero* and are allowable. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 96, 98, 100 and 102-104.

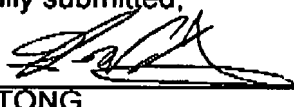
## II. CONCLUSION

Applicants submit that all claims now pending are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issuance are earnestly solicited.

If, however, the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone the undersigned at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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